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10/551,839	06/20/2006	Akiyasu Nozue	080306.56872US	4231

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EXAMINER
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DIAZ, THOMAS C

ART UNIT	PAPER NUMBER
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3656

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08/03/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/551,839	<b>Applicant(s)</b> NOZUE ET AL.	
	<b>Examiner</b> THOMAS DIAZ	<b>Art Unit</b> 3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 5 and 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 October 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Status of claims*

This office action is in response to the reply filed on 05/11/2009. The examiner appreciates and acknowledges applicant's response.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 now recites “a pin fit-in hole portion through which said pin fit-in hole is formed is arranged on said swing frame at a location of a place of meshing engagement between...” This recitation is not enabled by the specification since the specification only provides support for the pin fit-in hole portion being arranged at a location **in a vicinity** of a place of meshing engagement. By deleting the phrase “in a vicinity” for this particular clause it becomes unclear whether the pin fit in hole portion has to be directly on a place of meshing engagement or somewhere in the vicinity of it.

However, the deletion of "in a vicinity" corresponding to location of pin fit in hole in relation to a line going through the rotational axes is proper. In other words the other amendments deleting "in a vicinity" are proper.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maezawa et al. (JP 2000-336696; using machine translation from JPL website).**

#### ***Regarding claim 1,***

Applicant claims a swing mechanism (figs. 1-4) comprising a swing frame (fig.2, 5), An inner race (fig.4, 3) having an internal gear (fig.4, internal gear that meshes with 6) on an inner circumferential portion thereof and mounted on a side of an undercarriage (swing frame is part of the undercarriage), an outer race (fig.4, 4) rotatably arranged surrounding said inner race and provided with said swing frame mounted thereon (fig.4, swing frame is mounted on the outer race), a pinion (fig.4, 6) inserted through a pinion insertion hole (see fig.4, hole in the swing frame through which the pinion is inserted) formed in said swing frame and maintained in meshing engagement with said internal gear, a pinion drive device (fig.4, 7; the slewing gear comprises the pinion drive device. Additionally, it is well-known that the pinion would be

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attached to a drive device.) for rotationally driving said pinion, a pin fit-in hole (fig.2, 28 and 26) arranged in said swing frame such that a knock pin (fig.2, 21) fixed on said outer race is fitted in said pin fit-in hole to position said swing frame, characterized in that a pin fit-in hole portion (fig.2, portion having the pin fit in hole) through which said pin fit-in hole is formed is arranged on said swing frame at a location of a place of meshing engagement (see fig.1 and 4; the pin fit in hole portions are near the meshing engagements) between said pinion and said internal gear such that said pin fit-in hole portion extends toward said pinion insertion hole (fig.1-4; as defined the pin fit in hole portion extends towards the pinion insertion hole)

Maezawa et al. discloses that said pin fit-in hole is located on a line 31 that is preferably arranged at an angle of 30 degrees or less with respect to line 18, which passes through both the center of rotation of the pinion and the outer race. Maezawa et al. discloses the claimed invention except for explicitly stating that the pin fit-in hole is located on a line that extends through a center of rotation of said outer race and a center of rotation of said pinion. It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the angle of the pin fit-in hole relative to line 18 in order to find the best positioning of the swing mechanism, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. Additionally, it would have been obvious to one having ordinary skill in the art to try an angle of zero according to the teachings of Maezawa et al., such that as a result the pin fit-in hole would be located on line 18 which travels through both centers of rotation.

***Regarding claim 2,***

Maezawa et al. discloses another knock pin (fig.2, 20) is arranged between said swing frame and said pinion drive device,

Maezawa et al. discloses the knock pin for positioning said pinion drive is located on line 24 that is preferably arranged at an angle of 30 degrees or less with respect to line 18, which passes through both the center of rotation of the pinion and the outer race. Maezawa et al. discloses the claimed invention except for explicitly stating that the center of said knock pin for positioning said pinion drive is located on a line that extends through a center of rotation of said outer race and a center of rotation of said pinion. It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the angle of the center of said knock pin for positioning said pinion drive relative to line 18 in order to find the best positioning of the swing mechanism, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. Additionally, it would have been obvious to one having ordinary skill in the art to try an angle of zero according to the teachings of Maezawa et al., such that as a result the center of said knock pin for positioning said pinion drive would be located on line 18 which travels through both centers of rotation.

As a result of the above modification, Maezawa et al. discloses a center of said knock pin for positioning said swing frame being fitted in said pin fit in hole and a center of a knock pin for positioning said pinion drive device are each located on a line that

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extends through said center of rotation of said outer race and said center of rotation of said pinion (fig.1, when the angle of alpha and gamma are set to zero, both centers would lie on line 18).

***Regarding claim 3,***

Maezawa et al. discloses said pin fit-in hole is arranged in a center frame (the pin fit in hole is within a center frame being the part of the swing frame near the center) of said swing frame.

**Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maezawa et al. (JP 2000-336696; using machine translation from JPL website) in view of Yamamoto et al. (JP 09268600).**

***Regarding claim 4,***

Maezawa et al. discloses a pin fit-in hole in which said another knock pin for positioning said pinion drive device is fitted is arranged through a flange portion of said pinion drive device (see fig.2, pin fit in hole 22 is fitted through flange portion of the pinion drive device 7) .

Maezawa et al. fails to disclose that the pin fit in hole is arranged through a bracket for mounting said pinion drive device.

Yamamoto et al. teaches the use of a bracket (fig.3, 16) for mounting a pinion drive device (fig.3, 11) through which there is arranged pin fit in holes (fig.11; holes of 14 and 15); for the purpose of providing the predictable result of providing extra support

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to the pinion drive device since there would be more surface area for the pin fit in hole and thus more surface area for the knock pin.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to add the bracket with the pin fit in hole as taught by Yamamoto et al. to the swing mechanism disclosed by Maezawa et al. for the purpose of providing the predictable result of providing extra support to the pinion drive device since there would be more surface area for the pin fit in hole and thus more surface area for the knock pin.

### ***Response to Arguments***

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the



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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS DIAZ whose telephone number is (571)270-5461. The examiner can normally be reached on Monday-Friday 8:30am to 5:00pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571)272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas Diaz/  
Examiner, Art Unit 3656

/Richard WL Ridley/

Supervisory Patent Examiner, Art Unit 3656